

CLAIMS

1. A structural unit comprising a frame (14) having a connecting face (26) that surrounds an opening (28) and a cover (16) that is attached to the connecting face (26) to cover the opening (28), the frame (14) and the cover (16) being formed of materials with different coefficients of thermal expansion, characterised in that the connecting face (26) has a channel (37, 82) that opens towards the cover (16), at least one duct (38) communicates with the channel (37, 82) such that a filling compound (40) injected into the duct (38) is received in the channel (37, 82), the filling compound (40) attaching the cover (16, 30) to the frame (14, 80) and providing a seal therebetween.
2. The structural unit according to claim 1, characterised in that the filling compound (40) is a two-component adhesive.
3. The structural unit according to claim 1, characterised in that the filling compound (40) is a reactively cross-linking adhesive.
4. The structural unit according to one of claims 1 to 3, characterised in that the filling compound is a polyurethane based material.
5. The structural unit according to claim 1, characterised in that the filling compound (40) is a polyamide based adhesive.
6. The structural unit according to one of claims 1 to 5, characterised in that the filling compound is a hot-melt adhesive.
7. The structural unit according to one of the preceding claims, characterised in that the frame (14, 80) is made of a plastic material and the cover (16, 30) is made of metal.
8. The structural unit according to one of the preceding claims, characterised in that the structural unit (10) is a housing (20).

9. The structural unit according to claim 8, characterised in that the housing (20) has at least one electronic component thermally coupled to the cover (16, 30).

10. The structural unit according to one of the preceding claims, characterised in a contact (50) passes through the frame (14) and at least one cavity (60) is provided in the frame (14) that communicates with the channel (37) and the contact (50) so that the filling compound (40) is received in the channel (37) and surrounds the contact (50).

11. A method for the production of a structural unit having the steps of:

providing a frame (14, 80) having a connecting face (26) that surrounds an opening (28), the connecting face (26) having a channel (37, 82),

providing a cover (16, 30) that attaches to the connecting face (26) so that it covers the opening (28), the frame (14, 80) and the cover (16, 30) being made from materials with different coefficients of thermal expansion,

positioning the cover (16, 30) adjacent to the frame (14, 80) such that the cover (16, 30) lies on the connecting face (26), and

injecting a filling compound (40) through at least one injection duct (38) into the channel (37, 82) to connect the cover (16, 30) to the frame (14, 80) and seal a gap therebetween.

12. The method according to claim 11, characterised in that the filling compound (40) is a two-component adhesive.

13. The method according to claim 11, characterised in that the filling compound (40) is a reactively cross-linking adhesive.

14. The method according to claim 11, characterised in that the filling compound (40) is a polyamide based adhesive.

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15. The method according to claim 11, characterised in that the filling compound (40) is a polyurethane based material.

16. The method according to one of claims 11 to 15, characterised in that the filling compound (40) is a hot-melt adhesive.

5 17. The method according to one of claims 11 to 16, characterised in that,
the frame (14) is provided with a cavity (60), and
at least one contact element (50) is introduced into the frame (14) such that
it penetrates the frame (14) and is received in the cavity (60), wherein the contact
element (50) is encapsulated by injection moulding when the filling compound
10 (40) is injected into the cavity (60) and a seal is produced between the contact
element (50) and the frame (14).